

# Automated Configuration Management System (ACMS) Task Force Kickoff Meeting

11 - 13 March 1997 CBDCOM



ACMS - Providing the right product data when its needed

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#### **EXECUTIVE SUMMARY**

The Automated Configuration Management System (ACMS) Task Force kickoff meeting was hosted by CBDCOM on 11-13 Mar. 97. The purpose of the meeting was to begin the process of establishing an ACMS for use by all Army sites requiring access to engineering data. Thirty persons from various Army sites were in attendance

The meeting began with general discussions of the purpose of the meeting and a finalizing of the agenda. The attendees discussed ideas as to what the ACMS should consist of and then formal presentations were given of a sampling of current MSC concept of operations for configuration management. Following the presentations the attendees broke into 3 concurrent work group sessions to develop draft documents for the systems performance specification, market survey and acquisition strategy. After the groups had completed their work a general session convened to review and fine tune the work groups results.

The consensus vision statement was that the "ACMS will provide the required data when it is needed and in a form that the user can apply to accomplish the mission". The consensus concept of operation was "a system of systems with a shared set of core data via standard user interfaces". Information interchange within an Army site would be at each site's discretion as long as the core information is provided for off site users.

The Performance Specifications work group recommended that key issues considered in the establishment of this specification would be a comparison of internal/external vaulting, the costs of converting legacy data, and the cost of implementation at 9 potential sites and clients.

The Market Survey work group recommended hiring a contractor to evaluate the software sources. The group also developed a list of initial downselect criteria, the steps to be taken in the survey/analysis process, and a list of the final selection criteria.

The acquisition strategy group recommended a cost analysis, some key elements of the statement of work, and assigning a project manager for the system. An ACMS inproduction date of 30 Sep 99 was projected.

Task Force consensus was reached on the need to execute and monitor (in 2 phases) the activities documented in the Plan of Action as modified by the three work groups and the Task Force. It was decided that one integration contractor should be used to provide continuity for Phase I and to avoid responsibility conflicts. The chairman of the Engineering Data Management Systems Functional Coordinating Group would be the leader of the effort. The chair would work in conjunction with the Task Force and an executive committee (whose exact role is still to be determined) made up of a representative from each proposed site

#### 1 INTRODUCTION:

The Automated Configuration Management System (ACMS) Task Force kickoff meeting was hosted by CBDCOM on 11-13 Mar. 97 and was attended by 30 attendees from various Army sites. This meeting was the result of GEN Wilson's acceptance of an AMSAA's FAA recommendation to form a Task Force, led by IEA to investigate potential Configuration Management Automation systems, identify the best solution and identify implementation time frame and cost. GEN Wilson then asked for a plan of Action for this Task Force. The Plan of Action was subsequently approved, 12 Feb 97, by GEN Wilson for a go ahead.

#### 1.1 Purpose:

The purpose of this meeting was to begin the development of an Automated Configuration Management System for use by all Army sites requiring access to engineering data. Two major goals of the meeting were to:

- Review, discuss and agree upon a detailed plan of action and
- Reach agreement on the Army's Concept of Operations.

The above goals were met and the workshops provided the ground work for development of a performance specification, a market survey/analysis methodology and an acquisition strategy for the system.

#### 1.2 Agenda:

The original agenda is at Appendix A. During the introductory session the group decided to modify the agenda by rearranging it. They decided to develop the Army vision statement and concept of operations before discussing the detailed plan of action.

#### 1.3 Attendees:

A list of attendees, their organization, phone number and E-mail addresses is at Appendix B. There were thirty attendees in total from 16 Army organizations.

#### 2. RESULTS:

The meeting began with general discussions of the purpose of the meeting and a finalizing of the agenda. The introductory briefing is at Appendix C. After a brief discussion of the general concepts and consideration of some factors to be considered in developing an ACMS, the group held a brain storming session to start the development of a vision statement and a concept of operations for the ACMS. A listing was made of the ideas presented and then the ideas were divided into lists of strategies, and goals. Some of the comments did not fall into either group and these are listed as vision, comments or parking lot issues. The list of idea's grouped by categories are found at Appendix D.

#### 2.a. Vision Statement:

As a result of the brain storming session and the discussions that followed the agreed to vision is:

ACMS will provide the required data when it is needed and in a form that the user can apply to accomplish the mission. The required data consists of all the engineering data necessary to completely define an item for the intended purposes of specifying, designing, analyzing, manufacturing, maintaining, sustaining, testing, inspecting, and dispositioning that item over its entire life span. The ACMS must also operate in a diverse Army environment, integrate with other MSC business processes, and communicate with other MSC, government and industry information management systems.

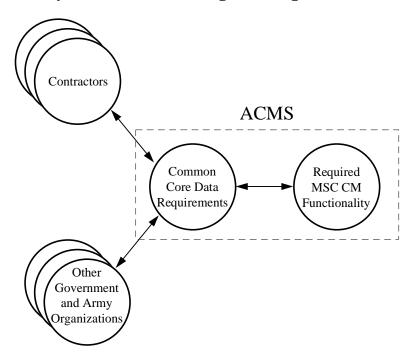
Note: The vision statement was discussed and drafted at the meeting with the understanding that IEA would refine the wording to include a definition of required data. The above statement reflects the redrafting of the vision based on this guidance.

#### 2.b Concept of Operations (CONOPS):

Four presentations were given to provide background information for an ACMS concept of operations and the workshops. These presentations characterized how the configuration management functions are presently being conducted and future plans for performing these functions. Three of the presentations are at Appendix E-1 (AMCOM), Appendix E-2 (CECOM) and Appendix E-3 (TACOM).

After the presentations the group began discussions that lead to development of a concept of operations for the ACMS. It was felt that because of the diverse requirements of the users, one all encompassing system could not satisfy all of the needs. The Task Force reached consensus on the following CONOPS:

#### **Army ACMS Concept of Operations**



### A SYSTEM OF SYSTEMS WITH A SHARED SET OF CORE DATA VIA STANDARD USER INTERFACES.

#### 2.c SUBGROUP WORK SESSIONS.

A brief description of the results of each of the subgroup work sessions is in the following paragraphs.

#### 2.c.1 Performance Specifications Workshop

This work group concentrated on defining what types of information should be included in the performance specification for an ACMS. Key items to be considered in the writing of the performance specification should include the functionality of the system, interfaces and functionality crossing interfaces (unique to a MSC and common to all MSCs) and verification of the system performance. A test plan for the MSC core functional requirements and a test plan for the common functional requirements needs to be identified. Other items to be included in the contract are a warranty to cover system reliability and delivery of the source code to the Army if the company goes out of business or decides to stop support for the system. This group also presented some action items for the other workshops. These were:

For the Acquisition Strategy workshop:

include internal/external vaulting issues in the economic analysis (EA) include costs of converting legacy data vs. interface to legacy systems in the EA. include 9 sites and clients in the EA only consider companies/system that are already in the market. consider system growth/flexibility (technology flexibility)

The complete outbriefing of this workshop is at Appendix F-1.

#### 2.c.2 Market Survey Workshop

The purpose of this workshop was to suggest key elements of a market survey for the ACMS. The 4 key elements identified were to identify valid sources, gather product information, check references, and evaluate the products. The group decided on an approach similar to CECOM's; hire a contractor to evaluate the sources and buy a PDM system, take user training from the vendors and downselect to 3 systems. This approach would result in a "Buyers Guide" for the sites. The presentation includes a listing of downselect criteria, steps to be completed in the survey/analysis process, final selection criteria, and a milestone chart that includes the actions to be taken between the milestone dates. The complete outbriefing of this workshop is at Appendix F-2.

#### 2.c.3 Acquisition Strategy Workshop

The Acquisition strategy work group concentrated; on a cost analysis, acquiring the system, some elements of the statement of work, who would be the procuring agency and who would be the program manager. A milestone chart was also prepared. The consensus of the group was to hire a single system integrator for the first phase of the effort. This would provide continuity for the program and clearly identify responsibility. The team recommended CECOM as the Procuring Agency and the Program Manager for the contract. The milestone chart shows a "in-production" date of 30 Sep 99. The complete outbriefing of this workshop is at Appendix F-3.

#### 2.d Task Force Wrap-up Session:

The Task Force had a general review session after the breakout work groups presented their results. Results of this discussion were that a consensus was reached on the actions that follow. Key points of consensus, were:

- (1 to execute and monitor (in 2 phases) the activities documented in the Plan of Action as modified by the three work groups and the Task Force.
- (2) agreement that IEA (G. Ney) should manage a contract for expert technical support to the task for Phase I.

#### 2.d.1. Actions:

The following actions, point of contact, and completion date were identified as a result of the meeting.

•	Plan future meetings.	Gordon Ney, IEA	
•	Issue E-Mail reflector instructions	Gordon Ney, IEA	14 Apr 97
•	Update the EDMS FCG list	Gordon Ney	14 Apr 97
•	Define "required data" in the	Gordon Ney, IEA	
	vision statement		
•	Determine when the next	Ann Minniti, CECOM	
	PDM conference will be and encourage.		
	Task Force attendance		
•	MSCs to prepare a 1 to 2 page	To be coordinated by .	
	functional description.	Don Ackley, IEA	
•	Investigate MSC Desk Top.	Don Ackley, IEA	
	Conferencing capabilities		
•	Obtain a copy of an Analysis of	Kathy Bickley, MEA	17 Apr 97
	Alternatives		
•	Prepare a budget request for	Willie Campbel, LAISO	15 Apr 97
	FY 98 & 99 money.		
•	Investigate how to get acquisition	Gordon Ney, IEA	
	community to add money to the		
	pot		
•	Get a format for an Analysis of	Gordon Ney, IEA	
	community to add money to the pot		
•	Prepare and staff a statement of	Tom Schneider IEA	
	work for Phase 1 of the effort.	~	
•	Revise the Plan of Action, charts	Gordon Ney, IEA	
	and words		
•	Award phase 1 contract	Gordon Ney, IEA	
•	Provide IEA a copy of CIMData's.	Ann Minneti, CECOM	
	PDM Market Survey		
•	Define the role of the executive	Gordon Ney, IEA	
	committee		

#### 2.d.2 Comments

Some pertinent comments that were made during the meeting are listed below.

- Need to stress intergroup coordination
- Communicate with the core group (principles and alternates) and interested individuals
- Need to be careful how performance specifications for automation systems are written.
- Task Force decisions will be made by consensus, not by voting

#### 2.d.3 Parking Lot Issues.

These are issues that surfaced at the meeting and while important in themselves were not felt to be within the scope of this effort. The are added here as documentation.

- Need to address the Procurement Package Input/Acquisition Requirements Package process.
- Need a sub-group to define ownership of the data elements in MIL-STD-2549
- STEP Application Protocol 203 should be adopted.
- Need to find out how Integrated Product Teams are using technical data.

#### 3. Next Steps

The following steps will be taken to as a continuation of the Task Force activities.

- Brief the results to HQ AMC
- Work the Task Force recommended actions
- Reconvene the Task Force (Target 6 May 97 at CECOM, Ft. Monmouth, NJ)

#### Appendix A

# Kickoff Meeting Agenda

#### 11 March

#### 0800 - 0900

Presentation of draft detailed plan of action

0900 - 1630

Work Group Sessions to review and modify detailed plan that includes description of product and steps needed to produce.

- ✓ System Specification
- ✓ Market Survey & Analysis
- ✔Acquisition Strategy and Analysis of Alternatives

#### 12 March

#### 0800 - 1000

Work Group recommended changes and general discussion

1000 - 1100

Task Force Problem Statement

1100 - 1630

MSC presentations of **Concept of Operations** 

- **✓**CECOM
- **✓**TACOM
- **✓**CBDCOM **✓**AMCOM
- **✓**IOC
- **✓**SSCOM
- ✓STRICOM ✓TECOM

#### 13 March

0800 - 0900

CBDCOM Demo/plans for their new PDM system

0900 - 1400

Formulate Army Concept of Operations (continued)

1400 - 1430

Summary of next steps and session feedback



ACMS - Providing the right product data when its needed

#### Appendix B

## ATTENDEES- ACMS MEETING 03/11-13/97

NAME	ORGANIZATION	DSN	E-MAIL
Bickley, Cathy Booker, Gayle Campbell, Willie Cantrell, Michael	AMC MEA EDMS PMO LAISO MICOM CBDCOM, ERDEC	746-1158 788-8277 645-7184 584-5587	CBICKLEY@REDSTONE.ARMY.MIL GAYLES@REDSTONE.ARMY.MIL CAMPBELL-WE@REDSTONE.ARMY.MIL MRCANTRE@CBDCOM.APGEA.ARMY.MIL
Catotti, Chris	STRICOM LAISO, MICOM CBDCOM, ERDEC TACOM, ARDEC	970-3913	CATOTTIC@STRICOM.ARMY.MIL
Couch, Cindy		645-7171	COUCH-CG@REDSTONE.ARMY.MIL
Dorsey, Shirl Jo		584-2859	SIDORSEY@CBDCOM.APGEA.ARMY.MIL
Goldsmith, Len		880-4040	GOLDSMITH@PICA.ARMY.MIL
Kachmarsky, James	TYAD	795-6487	JKACHMAR@TOBYHANNA-EMH3.ARMY.MIL
Kerbo, Ron L	MICOM	746-2236	RKERBO@REDSTONE.ARMY.MIL
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Lamb, Jean	HQ AMC, AMCCA	767-7774	JLAMB@HQAMC.ARMY.MIL
Martinez, Patricia	TACOM, WARREN IEA TACOM, ARDEC CECOM	786-6067	MARTINEP@CC.TACOM.ARMY.MIL
McGlone, Steve		793-6521	SMCGLO@RIA-EMH2.ARMY.MIL
Medor, Sandra		880-6538	SMEDOR@PICA.ARMY.MIL
Minniti, Ann		992-3645	MINNITI@DOIM6.MONMOUTH.ARMY.MIL
Morrison, Gloria	CBDCOM, ERDEC	584-3306	GJMORRIO@CBDCOM.APGEA.ARMY.MIL
Nelson, Nancy	CBDCOM, ERDEC	584-2939	NHNELSON@CBDCOM.APGEA.ARMY.MIL
Newlon, Roger	HQ IOC	793-5524	RNEWLON@RIA-EMH2.ARMY.MIL
Newman, Marlin	HQ IOC	793-4920	MNEWMAN@RIA-EMH2.ARMY.MIL
Ney, Gordon	IEA	793-6586	GNEY@RIA-EMH2.ARMY.MIL PUSTERHO@MONMOUTH.ARMY.MIL LAC@ARL.MIL ARENARD@TEC1.APG.ARMY.MIL
Pusterhofer, John	CECOM	992-3709	
Remeto, Lori	AMSAA	298-0306	
Renard, Annette	HQ TECOM	298-1484	
Salomon, Gary	CECOM	992-2224	SALOMON@DOIM6.MONMOUTH.ARMY.MIL
Schneider, Tom	IEA	793-7794	TSCHNE@RIA-EMH2.ARMY.MIL
Sitroon, Carol A	TACOM, ARDEC	880-6546,6647	CSITROON@PICA.ARMY.MIL
Viars, Eileen	TECOM, ATC	298-9417	VIARS@ATC.ARMY.MIL
Weidner, Hal	IEA	793-7790	HWEIDN@RIA-EMH2.ARMY.MIL
Winfield, Mary Jo	TACOM, WARREN	786-5279	WINFIELM@CC.TACOM.ARMY.MIL



# Appendix C

### **KICK-OFF PRESENTATION**



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4/9/97



# Automated Configuration Management System (ACMS) Task Force Kickoff Meeting

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ACMS - Providing the right product data when its needed

4/9/97



# Kickoff Meeting Purpose

- Review, discuss and agree upon detailed plan of action
- Reach agreement on the Army's Concept of **Operations**



product data when its needed



# Kickoff Meeting Agenda

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ACMS - Providing the right product data when its needed



#### FAA recommended:

"Set up Task Force Led by IEA to Investigate Potential Automated Systems that exist currently to include JCALS Pilot Programs which provide a <u>total</u> <u>integrated Configuration Management Suite of Tools</u> for all MSCs.

- <u>Criteria</u>, <u>time frame</u> & <u>Potential Savings</u> established by Task Force
- Task Force to provide <u>Best Choice</u> within negotiated time frame with CG AMC."

## Definition of Configuration Management

"A management process for establishing and maintaining consistency of a product's performance, functional, and physical attributes with its requirements, design and operational information throughout its life. ..."

(Draft MIL STD 2549)

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4/9/97



# What is the Problem?

- FAA perspective
- Your perspective
- Task Force perspective

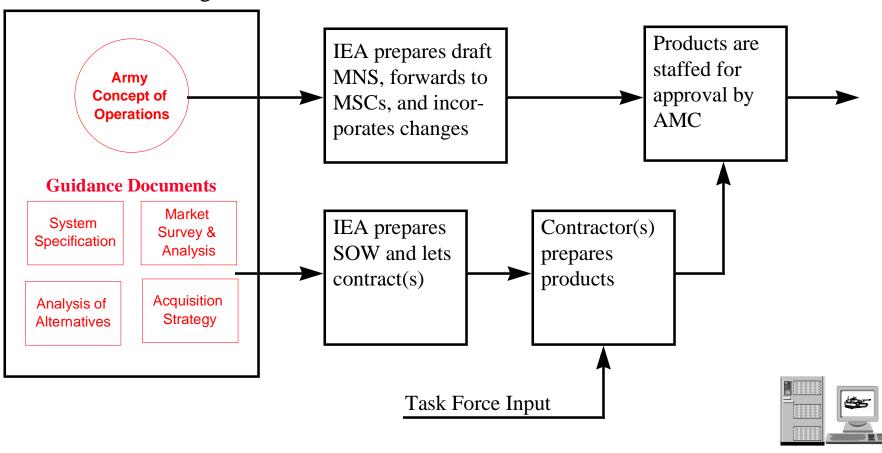


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# Focus of Kickoff Meeting

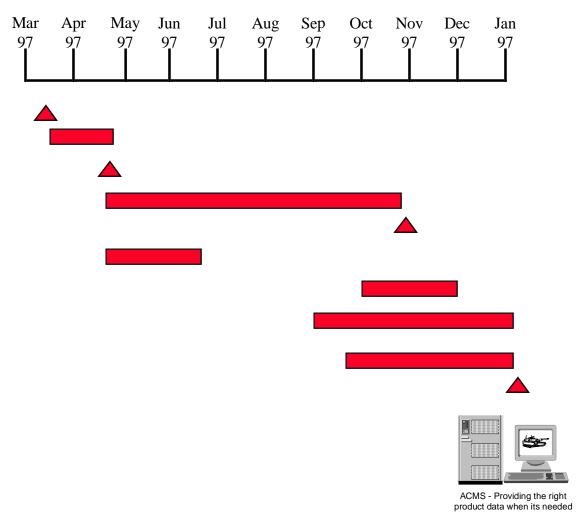
#### **Kickoff Meeting**





# Milestone Chart

Task Force Kickoff Meeting
Mission Need Statement
Interim IPR
Performance Specification
Interim IPR
Market Survey
Market Analysis
Analysis of Alternatives
Acquisition Strategy
Final IPR





# Proposed Rules

- Decisions reached by consensus
- No one person dominates conversation
- Stay on course use parking lot
- Try to capture all ideas use index cards
- Everyone needs to be polite, courteous and respectful





# Use Innovative Techniques

- VENUS Meetings
- Electronic Conferencing
- Web Technologies
  - Chat lines
  - Home pages
- Acrobat



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# Performance Specification

- Group Facilitator Mike Cantrell
- Expected Results
  - Taylored Performance Specification Guidance
  - Steps required to produce the Performance Specification
  - Milestones title, description, start date, end date
  - List of related functional descriptions
  - List of interfaces that should be addressed



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# Market Survey & Analysis

- Group Facilitator Carol Sitroon
- Expected Results
  - Taylored Market Survey and Analysis Guidance
  - Steps required to produce the Market Survey and the Market Analysis
  - Milestones title, description, start date, end date
  - List of Potential experts who could be used to conduct these tasks



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# Acquisition Strategy & Analysis of Alternatives

- Group Facilitator Gary Salomon
- Expected Results
  - Taylored Acquisition Strategy Outline
  - Steps required to produce the Analysis of Alternatives and the Acquisition Strategy
  - Milestones title, start date, end date
  - Determine factors that need to be addressed in the Analysis of Alternatives
  - Listing of approximately 4 feasible alternates title, description and preliminary list of pro's and con's



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#### Appendix D

#### BRAIN STORMING SESSION

Ideas from the brain storming session grouped in categories.

#### REQUIREMENTS

CM INTEGRATED WITH NATIVE DATA LOCALLY TAILORABLE MATERIEL CHANGE INCLUDED ABILITY TO STORE INTELLIGENT DATA AND HISTORY LINKAGE BETWEEN DATA AND CREATION TOOLS MUST HANDLE LEGACY DATA INTER-SITE COMMUNICATIONS COMMON INTERFACE (INTEROPERABILITY) CAPTURE DATA RELATIONS DATA ACCESS (SECURITY) CAPTURE DATA ONCE, USE MANY ADDRESS PROCUREMENT NEEDS OF DATA MUST HANDLE EDI TRAINING EARLY LIFE CYCLE DETERMINATION OF DATA USE INCLUDE ANCILLARY DATA MUST ADDRESS EMBEDDED SOFTWARE MUST BE INTEGRATED WITH MSC BUSINESS PROCESSES COMPLIES WITH CM PERFORMANCE SPEC 2549) SYSTEM MUST BE USER FRIENDLY SINGLE INTEGRATED SYSTEM API MUST BE WELL DEFINED AS TO ITS USE DIFFERENTIATE BETWEEN PART DAT AND PRODUCT DATA BUSINESS PROCESSES DETERMINE DATA PRESENTATION NEED SOURCE CODE FOR CONTINUITY OF OPERATIONS MULTI-PLATFORM OPERATION AND ACCESS

#### SPECIFICATIONS:

SYSTEM MUST PROVIDE SECURITY

LOCALLY TAILORABLE CAPTURE DATA ONCE, USE MANY MAXIMIZE AUTOMATION UPDATABLE TECHNOLOGY PACKAGE TIME PHASED SOLUTION INCORPORATE WEB TECHNOLOGY COLLECT REOUIREMENTS AND BENEFITS FROM CUSTOMERS USE EXISTING TECHNOLOGY WHEREVER POSSIBLE NEAR TERM GOAL COST SAVINGS LOOK AT HOW WE ASK FOR DATA (CONTRACT) INVOLVE CUSTOMERS MORE DEVELOP CM PERFORMANCE SPEC STICK WITH COTS LEVERAGE OFF OF INDUSTRY INITIATIVES CORE SYSTEM WITH INTERFACES TO OTHER APPLICATIONS USE DATA IN LEGACY SYSTEMS AUTOMATED SYSTEM RATHER THAN MECHANIZED SYSTEM

#### VISION

DEFINE CM PHILOSOPHY AND WHAT IS REQUIRED TO ACHIEVE IT PROVIDE DATA IN A TIMELY MANNER

#### COMMENTS

LESS STAFF IN THE FUTURE
DEVELOP A SYSTEM TO AUTOMATE CM

#### PARKING LOT ISSUES

GOAL FOR PPI/ARP PROCESS SYSTEM
SUB GROUP OWNERSHIP OF DATA ELEMENTS IN 2549
BE CAREFUL OF HOW WE WRITE AUTOMATION PERFORMANCE SPECS
CONSOLIDATE RESULTS OF WORKSHOP
ADOPT STEP AP 203
TECH DATA IPT USE

#### Appendix E-1

# AMCOM CONCEPT OF OPERATIONS

AUTOMATED CONFIGURATION
MANAGEMENT SYSTEM
(ACMS)

# Overview

- Assumptions
- Considerations
- Current Operations
  - ATCOM
  - MICOM
- Projected AMCOM Operations

# Assumptions for ACMS

- Coordinated CM Requirements Through 2002
  - Task for Tech Data IPT
- Initial Fielding
  - Not Earlier Than 15 Jun 98
- Support Legacy Weapon Systems
  - CMO Management Tool
  - IMMC Tool
    - Generation Breakdown Listing
    - Parts Usage within End Item
  - Spare Parts/Major Item/FMS Buys
- Support Projected Requirements
- Transition to Electronic Data Submittal
- Army/DoD Automated Systems Must be Value-Added

# Considerations

- Fluid Business Process Due to AMCOM Stand Up
- Acquisition Reform
  - Data Delivery
    - Performance Specs
    - TDP Delivered But Under Contractor Control
  - Contractor Life Cycle Support
    - Scope of Support for Repair Parts Process
  - MIL-STD-2549
  - Intelligent Data
- Role of IDE/JCALS Infrastructure
  - CITIS/JCITIS
  - JEDMICS
  - CCSS Modernization

# Current Operations ATCOM

- Limited Use of TD/CMS Functionality
  - Configuration Tracking
  - Parent/Child Relationships
  - Specification Information
  - Prescribed Data Load to Support Business Process
  - Change/Release File Updated as Requirements Identified
  - Configuration Not Current Based on Project Data Submission Requirements
- Microcosm of Acquisition Reform in Action
  - Contractor Managed Configuration
  - Contractor Formatted Data

# Current Operations MICOM

## ■ MICAPP Drives Acquisition

- Complete Top Down Breakdown
- Procurement TDPL
- Database Maintenance Using MEARS Where Required
- Complete and Up to Date MIL- and Industry Spec & Std Information
- Ozone Report\*
- DFARS Screening\*
- Packaging Information\*
- Discrepancy Report\*
- Next Higher Assembly Report\*
- ECP Tracking
- Major Item Configuration
- Condition/Usage File
- Commercial Item Identification
- Obsolescence Identification

# AMCOM Concept of Operations

- Initial (Jul 97)
  - Separate Aviation and Missile CM Systems
  - Separate Business Processes
- Interim (Oct 97)
  - Merged Aviation and Missile CM System (ICAPP)
  - Tailored Loading Procedures and Functionality
  - Separate Business Processes
- End State (??? ??)
  - Single CM System (AMCAPP)
  - Single Business Processes



## Appendix E-3





# TACOM CONCEPT OF OPERATIONS

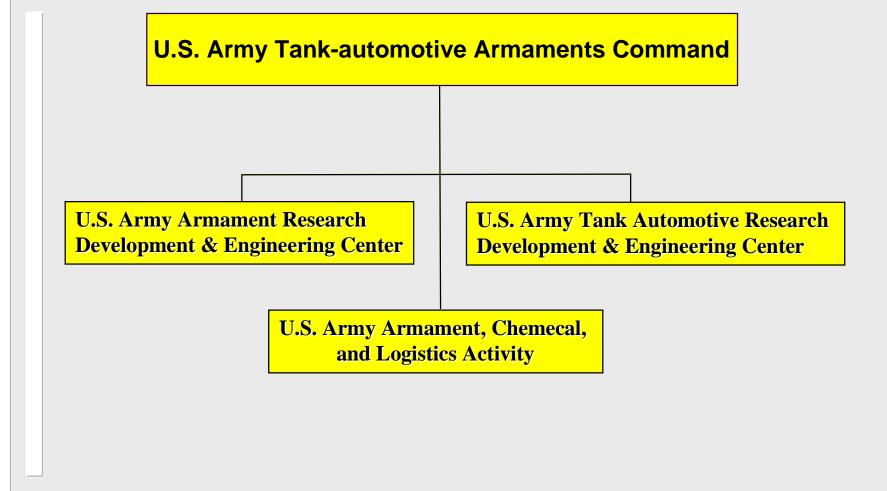


Briefing to AMC FCG
Prepared by
Carol Sitroon
and
Patrician Maritnez



# **Organization**





03/17/97

# **Customers**

**Program Executive Offices** 

Other MSCs (e.g. ARDEC's support for ACALA)

**DLA/ Navy/ AF/ Marines** 

**Industry** 

**Depots** 

Other government agencies

# **Engineering Data Management**

## **Primary Mission Elements:**

- Technical Data
- Standardization
- Configuration Management Status Accounting
- Engineering Data Archives
- Acquisition Requirements & Data Mgmt

### **Additional Services**

- **Full Spectrum of Specifications Services**
- **HAZMAT** reviews/problem resolution
- **Contract Data Management Review**

### **GOALS**

- Provide "Push Button" Technical & Engineering Data on demand, absolutely correct at minimum cost.
- Provide instantaneous access (local & remote) to data.
- Provide the best technical support for R&D, Production, and Sustainment
- Be the World Best and stay there by providing the most cost-effective engineering data and supporting technologies.

### Background

- 2.1 Million Digitized Active Engineering Documents
- 7.2 Million Engineering Documents
- 1.6M+ Potential Configurations
- 5000 Specifications & Standards
- On-line processing of 6,000+ TDPs yearly
- Process 50,000+ engineering changes yearly



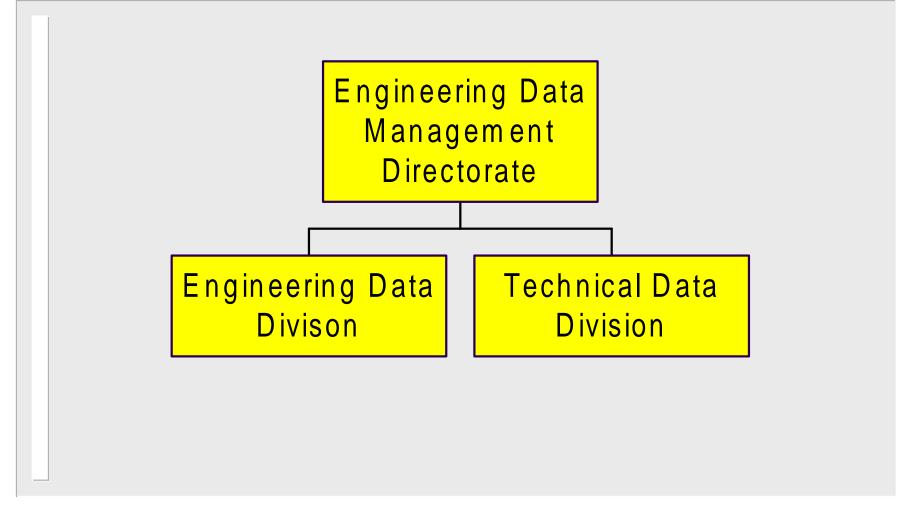
### **Systems**

- Digital Storage Retrieval Engineering Document System/Joint Engineering Data Management Information Control System
- **Technical Data/Configuration Management System**
- **Electronic Technical Data Package (E-TDP) (W)**
- **Procurement Package Information System (CARS)(A)**
- **Concurrent Engineering Access System (Viewer)(A)**
- **CM Status Accounting(A)**



# TACOM ARDEC Organization

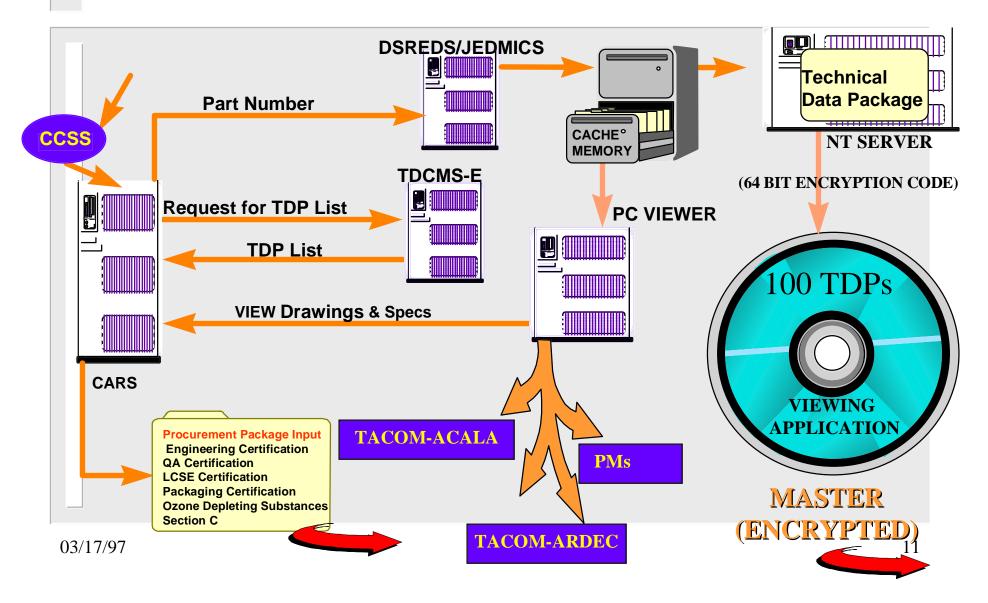




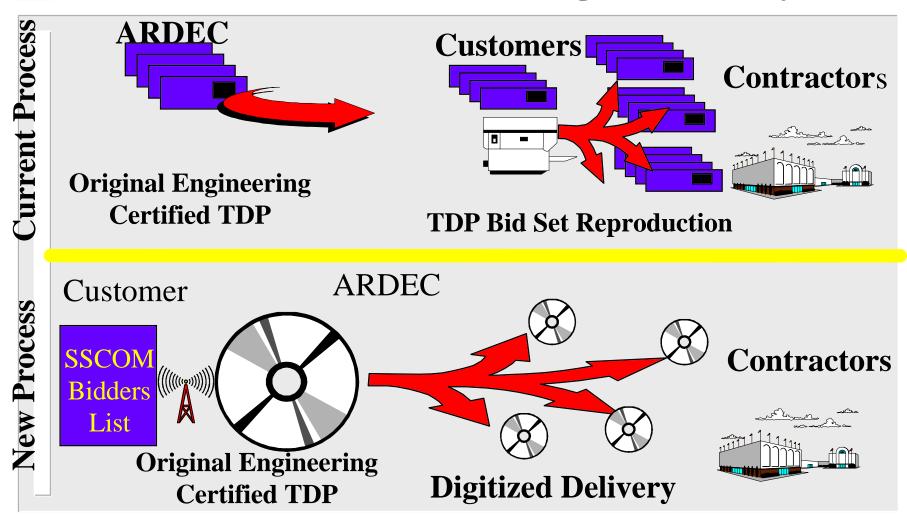
### Background

- September 1988 Technical Data Statistics
  - Approximately 10,000 Technical Data
     Packages certified annually
  - Reject rate 34%
  - 25% Completed within 60 Day Target
  - Average delivery time to Procurement 198 days
  - Manual Process
  - Daily Cost of delays \$400,000

# **Army Cals Compliant Acquisition Requirements System**

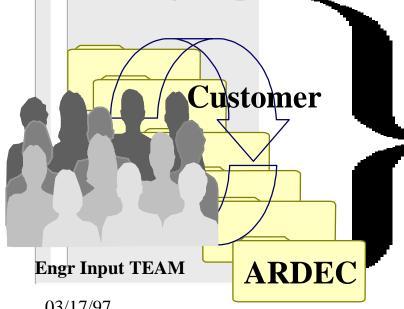


# **Engineering Data Archives Technical Data Package Delivery**



### **Technical Data Process Elements Computer Aided Requirements** System (CARS)

Distribute and route the hierarchical listing and associated data collected for the system/item configuration along with the Electronic Document images (TDP Imaging) for engineering review and certification for Procurement Package Input (PPI).

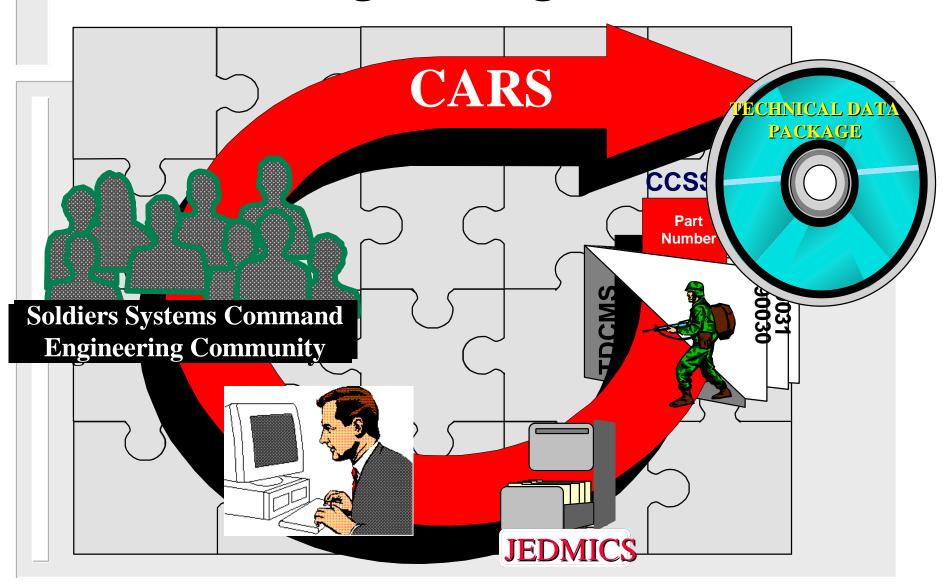


### **CARS Input**

Scope of Work **Quality Assurance Provisions Safety Data Provisions Packaging Requirements Engineering Certification** 

**Ozone Depleting Substances Industrial Readiness Provisions Hazardous Materials Provisions Transportation Requirements MAP & Acquisition Initiatives** 

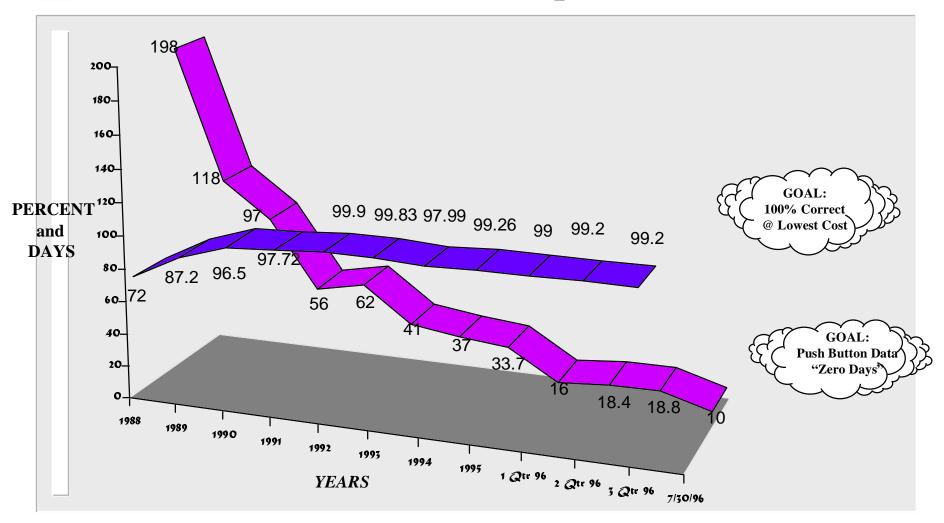
### Putting it all together



### Investment

- Tracker became operational in FY90
- Prior to Tracker it took an average of 97 days for ARDEC to certify a TDP for competitive procurement
- Turn around time for FY95 has been reduced to an average of 34 days
- FY95 cost savings is \$111,780,351

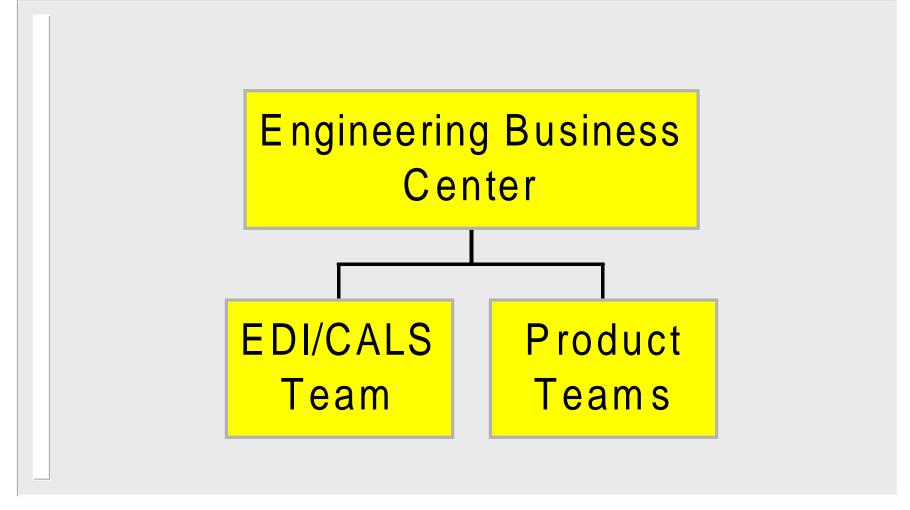
# Continuing Quality Improvement Performance Improvement



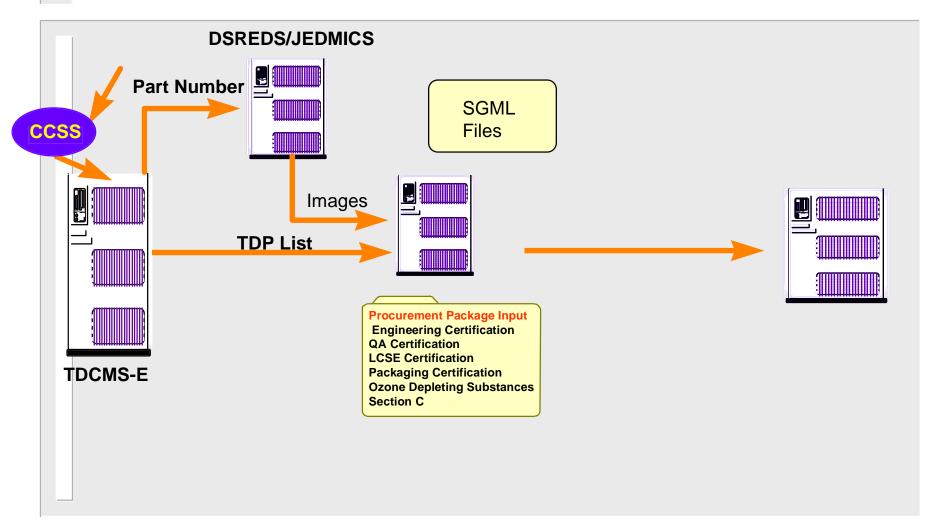


# TACOM Warren Organization





## TACOM Warren E-TDP



### Summary

- **Cost-Effective Organization**
- Customer Driven & Funded
- Growing Customer Base through Productivity Initiatives
- Largest Engineering Database in DoD with most diverse range of product configurations
- **Automated Processes to increase efficiencies**

# The Beginning

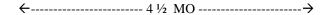
#### Appendix F-1

#### PERFORMANCE SPECIFICATIONS WORKSHOP

- 1. DEFINE MSC FUNCTIONAL REQUIREMENTS
- 2. DEFINE FUNCTIONALITY OF FACADE
- 3. IDENTIFY AND DEFINE INTERFACES AND FUNCTIONALITY CROSSING INTERFACES. ESSENTIAL- (UNIQUE MSC) AND ESSENTIAL (COMMON)
- 4. VERIFICATION

TEST PLAN FOR CORE FUNCTIONAL REQUIREMENTS (MSC)

TEST PLAN FOR COMMON FUNCTIONAL REQUIREMENTS



FEEDBACK ON STATUS

MSC FUNCTIONS CONTRACTOR

TO VISIT SITES AND TALK TO USERS

FACADE

**INTERFACES** 

BRAINSTORMING MEETING REVIEW OF DRAFT MARKETING RESEARCH

TEST PLAN - 1 ½ MONTHS

----- NOTES -----

#### ACTIONS FOR OTHER GROUPS

#### ACQUISITION STRATEGY

include in the economic analysis the internal/external vaulting issues.

Include in the economic analysis costs of converting legacy data vs interface to legacy systems

include in the economic analysis - 8 sites and clients

valid companies/systems to be considered, must already be in the market, not new developers

one issue to be considered in the acq. Strategy is system growth potential/flexibility (technology flexibility)

CONTRACTS: (REQUIRED TO BE INCLUDED)

WARRANTY (TO COVER RELIABILITY)

IF COMPANY GOES OUT OF BUSINESS OR DECIDES TO STOP SUPPORT FOR THE SYSTEM, THE CODE MUST BE DELIVERED TO THE ARMY

### Appendix F-2

### MARKET SURVEY

### Market Analysis (4 parts)

- Identify sources
- Gather product information
- Check references
- Evaluate products

### **CECOM Approach:**

- Hire KR to evaluate sources and buy PDM system
- Take user training from vendors
- Downselect to 3 systems

### **Thoughts**

- For current approach may turn Market Survey into a Buyers Guide
- What about the "Core Data/User Interface"?
- Will consider GOTS and COTS
- Partner with PM EDMS on PDM system evaluation

### **Initial Downselect Criteria:**

- Years of experience in CM/PDM
- Size/type of customer base
- Financial stability
- Must support SQL queries
- Must be a relational DB
- Product supportability

### Steps in Market Survey/Analysis process

- Gather support contractor suggestions (Mar 31)
- Get CECOM & CBDCOM PDM Market Survey info (Mar 31)
- Read/Analyze Survey Info (March 31-April 18)
- Generate Task Contract Requirements (March 31-April 18)
- Use DTV and Website for communication (April 18)
  - Discuss Support Contractor/Pick support contractor
  - Homework
  - Discuss Draft Task Contract Requirements

## Steps in Market Survey/Analysis process <u>Cont.</u>

- Arrange for vendor on-site demos (May 97)
- Document vendor pros/cons for Market Analysis (July 97)
- Downselect to 4 top systems (July August 97)
- Schedule training for key decision makers on top 4 systems(August 97)
- Develop possible criteria for final selection (after completion of training)
- Present/Publish results / recommendations to FCG members(Oct 97)

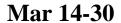
**NOTE**: Information should be utilized by the other FCG Teams

### (PROPOSED) Final Selection Criteria

- GUI (ease of use)
- True PDM system? (vs EDM or CM)
- True integrated WFM
- CM capability
- SQL queries
- Ability/ease of customization
- CAD/CAE integration

- Licensing issues
- Web client capability
- Prior experience in large organization implementation
- Ease of interface with Legacy systems
- Understanding military terms and definitions
- Robust database (scaleable, search, sort)
- Integrated Viewer Strategy
- Network Compatablity

### **Actions To be Taken Between Milestone Dates**





#### **April 1-17**

- Read/Analyze Survey Info
- Generate Task
  Contract Req

### **April 19 -Beginning of**

#### May

 In depth Review PDM Market Survey

#### Mar 11-13 Kick Off Meeting

#### **Mar 31**

- Support contractor suggestions
- PDM Market Survey info from CECOM & CBDCOM

#### April 18

Use DTV and Website for communication

- Discuss Support
- Contractor/Pick support contractor
- Homework
- Discuss Draft Task Contract Requirements

#### **Beginning May**

Downselect to Best 10 Vendors

### **Actions To be Completed at Milestone Dates**

- Arrange for vendor on-site demos (May 97)
- Document vendor pros/cons for Market Analysis (July 97)
- Downselect to 4 top systems (July August 97)
- Schedule training for key decision makers on top 4 systems(August 97)
- Develop possible criteria for final selection (after completion of training)

Present/Publish results / recommendations to FCG members(Oct 97)

**NOTE**: Information should be utilized by the other FCG Teams

#### Appendix F-3

### ACQUISITION STRATEGY - Working Group 03/13/97

- I. ACQUIRE A COST ANALYSIS
- II. ACQUIRE AND INSTALL THE ACMS
  - 1. LET EACH MSC DO THEIR OWN PROCUREMENT AND INTEGRATION
  - 2. HIRE A SINGLE ARMY SYSTEM INTEGRATOR
  - 3. GIVE THE DOLLARS TO THE PM EDMS

Option 2 was recommended by the group

#### III. SOW FEATURES

#### PHASE I USE SINGLE ARMY SYSTEM INTEGRATOR

CONSULTANT

TERMINAL REQUIREMENTS

MARKET SURVEYS

SITE SURVEYS AND REMOTE USERS

**BUSINESS PROCESS IMPROVEMENT** 

DEVELOP CORE TOOLSET RECOMMENDATIONS FOR EACH SITE

COST ESTIMATE FOR EACH SITE

#### PHASE II

DEVELOP AND IMPLEMENT THE FACADE
BUY AND INSTALL HARDWARE AND SOFTWARE AND MAKE SURE IT WORKS
SYSTEM MAINTENANCE
PROVIDE TRAINING
DATA MIGRATION

#### IV. PROCURING AGENCY - USE EXISTING CONTRACT VEHICLES

- 1. PM JCALS
- 2. PM EDMS
- 3. CECOM
- 4. IEA (AMSAA)
- 5. OTHER GOVERNMENT CONTRACTS

Option 3 was recommended by the team.

#### V. PROGRAM MANAGER

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- 2. DCS RDA
- 3. CECOM (AMC IT EA)
- 4. CBDCOM
- 5. EDMS FCG

Option 3 was recommended by the team.

#### VI. MILESTONES

COST VALIDATED

IN PRODUCTION

CECOM PM/LAISO/CEAC

PROGRAM BUDGET SUBMISSION FY 99 +

IEA/LAISO WILLIE CAMPBELL

AWARD PHASE II VIA EXISTING CONTRACT

PHASE I	
PROGRAM BUDGET SUBMISSION RESPONSIBLE- IEA/LAISO (WILLIE CAMPBELL) AMC RELEASES \$- IEA/NEY AMC/KNOWLES	14 APR 97
PM DEVELOPS SCOPE OF WORK RESPONSIBLE-	30 APR 97
EXEC COMMITTEE IPR T REVIEW PHASE I SOW	06 MAY 97
AWARD PHASE I	16 MAY 97
MISSION NEED STATEMENT MARKET SURVEY SITE SURVEYS   SYSTEM SPEC SITE RECOMMENDATIONS CORE RECOMMENDATIONS COST ESTIMATE PREPARE ANALYSIS OF ALTERNATIVES	
SUBMIT COST BENEFIT/ANALYSIS FOR VALIDATION	14 JAN 98

18 FEB 98

15 APR 98

24 JUN 98

30 SEP 99